

Attorney's Docket No. K&A 23-0070

**APPLICATION**

**FOR UNITED STATES LETTERS PATENT**

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**SPECIFICATION**

TO ALL WHOM IT MAY CONCERN:

BE IT KNOWN THAT I, **DAVID L. OSWALD**, a citizen of  
UNITED STATES OF AMERICA, have invented a new and useful  
**COMPUTER MONITOR RECEIVER** of which the following is a  
specification:



## COMPUTER MONITOR RECEIVER

### BACKGROUND OF THE INVENTION

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#### Field of the Invention

The present invention relates to computer monitoring devices and more particularly pertains to a new computer monitor receiver  
10 for monitoring children's internet usage.

#### Description of the Prior Art

The use of computer monitoring devices is known in the prior  
15 art. More specifically, computer monitoring devices heretofore devised and utilized are known to consist basically of familiar, expected and obvious structural configurations, notwithstanding the myriad of designs encompassed by the crowded prior art which have been developed for the fulfillment of countless objectives and  
20 requirements.

Known prior art includes U.S. Patent No. 5,604,509; U.S. Patent No. 5,990,582; U.S. Patent No. 6,522,309; U.S. Patent No. 5,374,940; U.S. Patent No. 6,446,119; U.S. Patent No. 6,239,833;  
25 U.S. Patent No. 6,047,060; U.S. Patent No. 5,349,675; U.S. Patent No. 5,338,252; U.S. Patent No. 5,732,212; U.S. Patent No. 5,832,212; U.S. Patent No. 5,835,722; U.S. Patent No. 5,949,415; U.S. Patent No. 6,023,507; and U.S. Patent No. 5,987,611.

While these devices fulfill their respective, particular objectives and requirements, the aforementioned patents do not disclose a new computer monitor receiver. The inventive device includes a video tap assembly operationally coupled between a video output and a video display device of an information handling system for routing a monitoring video signal, a signal transmission assembly for conditioning the monitoring video signal for transmission through a propagation channel, a receiver assembly for conditioning a signal received through the propagation channel and a video presentation device for displaying a real time substantially identical image of the video provided to a user being monitored.

In these respects, the computer monitor receiver according to the present invention substantially departs from the conventional concepts and designs of the prior art, and in so doing provides an apparatus primarily developed for the purpose of monitoring children's internet usage.

## **SUMMARY OF THE INVENTION**

In view of the foregoing disadvantages inherent in the known types of computer monitoring devices now present in the prior art, the present invention provides a new computer monitor receiver construction wherein the same can be utilized for monitoring children's internet usage.

The general purpose of the present invention, which will be described subsequently in greater detail, is to provide a new computer monitor receiver apparatus and method which has many of the advantages of the computer monitoring devices mentioned heretofore and many novel features that result in a new computer monitor receiver which is not anticipated, rendered obvious,

suggested, or even implied by any of the prior art computer monitoring devices, either alone or in any combination thereof.

To attain this, the present invention generally comprises a  
5 video tap assembly operationally coupled between a video output  
and a video display device of an information handling system for  
routing a monitoring video signal, a signal transmission assembly  
for conditioning the monitoring video signal for transmission  
through a propagation channel, a receiver assembly for conditioning  
10 a signal received through the propagation channel and a video  
presentation device for displaying a real time substantially  
identical image of the video provided to a user being monitored.

There has thus been outlined, rather broadly, the more  
15 important features of the invention in order that the detailed  
description thereof that follows may be better understood, and in  
order that the present contribution to the art may be better  
appreciated. There are additional features of the invention that  
will be described hereinafter and which will form the subject matter  
20 of the claims appended hereto.

In this respect, before explaining at least one embodiment of  
the invention in detail, it is to be understood that the invention is  
not limited in its application to the details of construction and to  
25 the arrangements of the components set forth in the following  
description or illustrated in the drawings. The invention is capable  
of other embodiments and of being practiced and carried out in  
various ways. Also, it is to be understood that the phraseology and  
terminology employed herein are for the purpose of description and  
30 should not be regarded as limiting.

As such, those skilled in the art will appreciate that the conception, upon which this disclosure is based, may readily be utilized as a basis for the designing of other structures, methods and systems for carrying out the several purposes of the present invention. It is important, therefore, that the claims be regarded as including such equivalent constructions insofar as they do not depart from the spirit and scope of the present invention.

Further, the purpose of the foregoing abstract is to enable the U.S. Patent and Trademark Office and the public generally, and especially the scientists, engineers and practitioners in the art who are not familiar with patent or legal terms or phraseology, to determine quickly from a cursory inspection the nature and essence of the technical disclosure of the application. The abstract is neither intended to define the invention of the application, which is measured by the claims, nor is it intended to be limiting as to the scope of the invention in any way.

It is therefore an object of the present invention to provide a new computer monitor receiver apparatus and method which has many of the advantages of the computer monitoring devices mentioned heretofore and many novel features that result in a new computer monitor receiver which is not anticipated, rendered obvious, suggested, or even implied by any of the prior art computer monitoring devices, either alone or in any combination thereof.

It is another object of the present invention to provide a new computer monitor receiver which may be easily and efficiently manufactured and marketed.

It is a further object of the present invention to provide a new computer monitor receiver which is of a durable and reliable construction.

5       An even further object of the present invention is to provide a new computer monitor receiver which is susceptible of a low cost of manufacture with regard to both materials and labor, and which accordingly is then susceptible of low prices of sale to the consuming public, thereby making such computer monitor receiver  
10 economically available to the buying public.

Still yet another object of the present invention is to provide a new computer monitor receiver which provides in the apparatuses and methods of the prior art some of the advantages thereof, while  
15 simultaneously overcoming some of the disadvantages normally associated therewith.

Still another object of the present invention is to provide a new computer monitor receiver for monitoring children's internet  
20 usage or the internet usage of persons of concern such as those with diminished capacity.

Yet another object of the present invention is to provide a new computer monitor receiver which includes a video tap assembly  
25 operationally coupled between a video output and a video display device of an information handling system for routing a monitoring video signal, a signal transmission assembly for conditioning the monitoring video signal for transmission through a propagation channel, a receiver assembly for conditioning a signal received  
30 through the propagation channel and a video presentation device for displaying a real time substantially identical image of the video provided to a user being monitored.

Still yet another object of the present invention is to provide a new computer monitor receiver that provides real-time monitoring of video information being presented to a child or other user being  
5 monitored, even when engaged in other activities requiring the parent or person monitoring usage to be in another room.

Even still another object of the present invention is to provide a new computer monitor receiver that does not rely on  
10 blocking software, firewalls, or logging system for inhibiting access to prohibited or undesirable cites.

A further object of the present invention is to provide a new computer monitor receiver that allows monitoring of a child's  
15 computer usage of allowed cites to insure that unwanted messages, inappropriate or predatory contact are stopped and corrective steps can be taken to protect child users.

20 These together with other objects of the invention, along with the various features of novelty which characterize the invention, are pointed out with particularity in the claims annexed to and forming a part of this disclosure. For a better understanding of the invention, its operating advantages and the specific objects attained  
25 by its uses, reference should be made to the accompanying drawings and descriptive matter in which there are illustrated preferred embodiments of the invention.

## BRIEF DESCRIPTION OF THE DRAWINGS

The invention will be better understood and objects other than those set forth above will become apparent when consideration is  
5 given to the following detailed description thereof. Such description makes reference to the annexed drawings wherein:

Figure 1 is a schematic view of a new computer monitor receiver in use according to the present invention.

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Figure 2 is a schematic functional interconnect diagram of the present invention.

Figure 3 is a schematic signal flow diagram of the present  
15 invention.

## DESCRIPTION OF THE PREFERRED EMBODIMENT

With reference now to the drawings, and in particular to  
20 Figures 1 through 3 thereof, a new computer monitor receiver embodying the principles and concepts of the present invention and generally designated by the reference numeral 10 will be described.

As best illustrated in Figures 1 through 3, the computer  
25 monitor receiver 10 generally comprises a video tap assembly 20, a signal transmission assembly 30, a propagation channel 40, a receiver assembly 50, and a video presentation (display) means 60.

The video tap assembly 20 is used for operationally coupling  
30 to a video output 4 of the information handling system 2. The video tap assembly 20 provides a monitoring video signal containing information substantially identical to a video signal

provided by the video output 4 of the information handling system 2.

5 The signal transmission assembly 30 is operationally coupled to the video tap assembly 20. The signal transmission assembly 30 conditions the monitoring video signal for transmission through the propagation channel 40. The signal transmission assembly 30 is operationally coupled to the propagation channel 40.

10 The receiver assembly 50 is also operationally coupled to the propagation channel 40 for receiving a signal propagated from the signal transmission assembly 30 through the propagation channel 40. The receiver assembly 50 conditions the received signal for recovering information substantially identical to the video signal  
15 from the information handling system 2.

The video presentation means 60 is operationally coupled to the receiver assembly 50 for presenting video information to a monitoring user substantially identical to information presented by  
20 the information handling system 2 to the user being monitored.

The propagation channel 40 may be free space, coaxial cable, in-situ household ac wiring, in-situ household telephone wiring, in-situ cable television wiring, or fiber optic cable.  
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The video presentation means 60 may be a television, computer monitor, video monitor, PDA device, laptop computer system, or video recording device.

In a preferred embodiment, the signal transmission assembly 30 further includes, a modulator 32 for impressing the monitoring video signal upon a carrier signal; and a transmitter 34 operationally coupled to the modulator 32 to facilitate propagation to the receiver assembly 50. Similarly, the receiver assembly 50 further includes a receiver 54 for converting the signal received from the signal transmission assembly 30 through the propagation channel 40; a demodulator assembly 52 operationally coupled to the receiver 54 for demodulating the propagated signal into a received signal; and a video output 56 operationally coupled to the demodulator assembly 52 for facilitating routing of received signal to a video presentation means 60.

The system may also include a pair of blocking assemblies 38,58. Each one of said blocking assemblies 38,58 is operationally coupled to an associated one of the signal transmission assembly 30 and the receiver assembly 50. Each one of said pair of blocking assemblies 38,58 is for facilitating coupling the signal transmission assembly 30 and receiver assembly 50 to the propagation channel 40 when the propagation channel 40 also routes other signals unassociated with the system 10.

In an embodiment, the blocking assemblies 38,58 are designed for filtering out undesired rf signals.

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In another embodiment, the blocking assemblies 38,58 facilitate blocking power signals from conventional household electrical lines, facilitating use of these lines as the propagation channel 40 between the signal transmission assembly 30 and the receiver assembly 50.

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In still another embodiment the blocking assemblies 38,58 are designed for using conventional telephone lines as a propagation channel 40 on a non-interference basis with conventional telephone signaling.

In yet another embodiment the blocking assemblies 38,58 are designed for using conventional catv lines as a propagation channel 40 on a non-interference basis with conventional catv signaling.

Further, the present system anticipates that the use of various methods of securing the information being transmitted through the propagation channel may be required. These methods may include, but certainly are not limited to: encryption, time division multiple access techniques, frequency division multiple access techniques, frequency hopping, and direct sequence spreading. Additionally, the output power associated with the transmitter may be adjusted to limit the probability of unintended interception or interference.

As to a further discussion of the manner of usage and operation of the present invention, the same should be apparent from the above description. Accordingly, no further discussion relating to the manner of usage and operation will be provided.

With respect to the above description then, it is to be realized that the optimum dimensional relationships for the parts of the invention, to include variations in size, materials, shape, form, function and manner of operation, assembly and use, are deemed readily apparent and obvious to one skilled in the art, and all equivalent relationships to those illustrated in the drawings and

described in the specification are intended to be encompassed by the present invention.

Therefore, the foregoing is considered as illustrative only of  
5 the principles of the invention. Further, since numerous  
modifications and changes will readily occur to those skilled in the  
art, it is not desired to limit the invention to the exact construction  
and operation shown and described, and accordingly, all suitable  
modifications and equivalents may be resorted to, falling within the  
10 scope of the invention.